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EMENDATIONS OF THE SEVENTH EDITION OF GRAY'S MANUAL,— I.¹

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It is more than six months since the new edition of Gray's Manual was issued and a considerably longer time since the earlier portions of the work were cast. During this interval many annotations have been entered in the copies of the Manual used at the Gray Herbarium. Part of these notes correct errors — most of them happily of minor importance — which have been detected by members of the herbarium staff or reported by friends and correspondents. Others are of the nature of additions, extension of ranges, etc., being in most instances the result of information received since the issue of the Manual. In response to requests from several sources that such emendations as are collected at the Gray Herbarium should be brought together and from time to time published for general use, the present article has been compiled as the first of a possible series.

Supplements and addenda to works on systematic botany are in general inconvenient, both because they are likely to be overlooked and because such species, varieties, and notes as they contain rarely stand in any clear relation to the subject matter in the body of the work. For this reason it seems best to make all additions and changes in the well known form of *errata* from which those who desire can readily annotate their copies of the Manual and thus do much toward bringing them to date. If this course is followed the emendations will be found at the place and time they are needed.

¹ A limited number of reprints of this article, upon paper of the size of Gray's Manual (larger form), can be supplied by the management of RHODORA (Room 1052, Exchange Bldg., Boston, Mass.), postpaid, at 10 cents each.

Attention of correspondents is especially drawn to the fact that only such additions and changes are here presented as can be made with confidence and definiteness. Some valued notes have been received, which involve nice questions of judgment and consequently require further study before it is possible to express any confident opinion in regard to them. It is hoped that these matters may receive satisfactory solution and be duly recorded later. Such for instance are extensions of range where a slight doubt of identity is involved.

Regarding the corrections here brought together, it may be stated that the rather numerous cases in which generic names have lost their accents in the final impression of the Manual are due to a technical difficulty in the printing, these names having been in nearly all cases properly accented on the proofs. The insertion of many pre-Linnaean authorities not recorded in the Manual is here made in order to give a fair degree of uniformity in this rather difficult matter. The use of these bracketed authorities, though it has become customary in many scholarly works such as the *Index Kewensis*, Dalla Torre & Harms's *Genera Siphonogamarum*, etc., is a matter of sentiment rather than a scientific necessity. It is furthermore very difficult to carry out this practice with entire consistency. To attain some measure of uniformity in the matter, it has seemed best to employ these pre-Linnaean authorities only in cases where the earlier use of the name was at least partially in accord with the Linnaean and post-Linnaean application and in the second place not to attempt to carry these authorities back of the beginning of the 18th century. The publication of Tournefort's *Institutiones* in 1700, soon followed by the notable generic works of Rivinius, Ruppius, Dillenius, Vaillant, and some others, introduced a new epoch in plant-classification which for genera is almost as noteworthy as 1753 has become for species through the publication of Linnaeus's *Species Plantarum*.

The writers gratefully acknowledge aid from the collectors and other correspondents, who have kindly furnished many of the facts briefly recorded in the following emendations. Special assistance has been received from Dr. G. G. Kennedy and Dr. A. S. Pease, who have furnished lists of omitted accents and given scholarly aid in determining doubtful cases in the accentuation of the scientific names. Mr. B. F. Bush of Courtney, Missouri, has contributed an especially long and helpful list of extended ranges of plants growing in his state. Further notes and corrections of a similar kind may at any time be

addressed to the Gray Herbarium and will always be gratefully received and carefully investigated. In general such corrections, especially if they relate to extensions of range, should be accompanied by specimens.

Since the additional plants here mentioned as occurring within the range of the Manual were not actually included in the published work, it seems unwise to make on account of them any changes in the tabular summary on pages 23 to 27. Such statistical alterations of these tables can easily be made by users of the Manual if they desire to do so.

Where the following errata seem to need explanation this is added in bracketed paragraphs. Lines are counted from the top of the page, but the line of running page-heading is not included in the count.

Page 28, after line 7, insert: *A. Juss.*—**Jussieu**, Adrien de.

Page 29, line 24; for **Gussoni** read **Gussone**

after line 50, insert: *Juss. A. Juss. Jussieu*, Adrien de.

Page 34, line 57; after common insert: , especially northw.

Page 35, line 11; for Underw. read Keyserling.

[*Phegopteris Phegopteris* (L.) Keyserling, Polyp. et Cyath. Hb. Bung. 50 (1873); Underw. Mem. Torr. Bot. Club, v. 12 (1893).]

line 52; for vines read veins

Page 36, line 6; for Ky. read Mo. (*Bush*)

for line 37, substitute: Mo. (*Bush*), southw. and southwestw. (Mex.)

Page 37, lines 17 to 19; for Smooth, except some bristly-chaffy hairs on the midribs and especially on the *dark purple and polished stalk* and rhachis, 1–6 dm. high; *fronds* READ Dark purple or reddish brown polished *stipes and rhachises* decidedly *hairy* and harsh to the touch at least on one side; *fronds* 1–6 dm. high,

line 24; add: Var. **BÚSHII** Mackenzie. Stipes and rhachises essentially glabrous. (*P. glabella* Mett.) — Range of the typical form.

line 32; add as synonym: **CRYPTOGRAMME** Hook.

Page 39, line 8; for *Forma* read Var.

Page 40, line 48; for Var. **SCHWEINÍTZII** (Beck) Small (*Aspidium acrostichoides*, var. *incisum* Gray) read Var. **INCISUM** Gray

(*Aspidium acrostichoides*, var. Gray; *Polystichum acrostichoides*, var. *Schweinitzii* Small)

[This change is required by Articles 48 and 49 of the Vienna Rules, which necessitate the adoption in the varietal category of the name *incisum*, this being the earliest varietal designation of the plant in question. The synonymy of this plant is as follows: *Aspidium Schweinitzii* Beck, Bot. N. and Mid. St. 449 (1833). *A. acrostichoides*, β . *incisum* Gray, Ann. Lyc. N. Y. iii. 238 (1835). *Polystichum acrostichoides*, var. *incisum* Gray, Man. 632 (1848). *P. acrostichoides*, var. *Schweinitzii* (Beck) Small, Bull. Torr. Bot. Club, xx. 464 (1893); Robinson & Fernald in Gray, Man. ed. 7, 40 (1908), by nomenclatorial error.]

Page 41, line 62; *omit*: ; reported from Mo.

[Mr. B. F. Bush writes that the specimens which formed the basis of the report of *Aspidium simulatum* from Missouri were incorrectly determined.]

Page 42, line 18; after Aug. *insert*: Forma DAVENPÓRTII (Floyd) Eastman has some of the pinnae cristate-forked at the tip.— E. Mass. (Floyd) and probably elsewhere.

Page 43, line 23; *for* Hook. *read* Gray.

[The combination *Aspidium spinulosum*, var. *dilatatum* (Hoffm.) was merely implied by Hooker, Brit. Fl. 444 (1830). It seems to have been first actually made by Gray, Man. ed. 2, 597 (1856).]

line 30; after *tripinnate* *insert*: , less enduring

line 32; *for* Concord, Mass. (Purdie). *read* Concord (Purdie) and Lexington (W. Faxon), Mass.

Page 45, line 8; *for* westw. to Minn. *read* westw. to Mo. and Minn.

line 22; *for* 1–3 *read* 1–5

line 29; *for* Mett. *read* (Willd.) Mett.

Page 46, line 22; over the first **A** of **OSMUNDACEAE** *insert* a grave accent.

Page 48, line 31; *for* Lasch *read* (Lasch) Milde

Page 49, line 4; *for* var. *read* forma

Page 50, line 35; *after* southw. *insert*: naturalized on Pecowsic Brook and Connecticut River near Springfield, Mass. (Mrs. Owen).

Page 54, line 34; *for* L. *read* [Rupp.] L.

Page 55, line 63; *after* Mts., *insert*: bluffs,
lines 63 and 64; *for* s. to S. C. and Ala. *read* Mo., Ala.,
and S. C.

Page 64, line 50; over the **A** of **LARIX** insert a grave accent. *For*
Adans. *read* Mill.

Page 66, line 53; add as synonym: THUYA [Tourn.] B. Juss.

Page 69, lines 2 and 3; *for* N. S. and Me. *read* e. Que.

Page 70, line 10; *for* Dioecious *read* Monoecious or dioecious

Page 72, line 56; *for* *P. Nuttallii* *read* *P. Nuttali*
[This was the original form of the name.]

Page 74, line 7; *for* Merat *read* Mérat

Page 79, line 13; over the first **A** of **NAJAS** insert a grave accent.

line 23; add as synonym: NAIAS B. Juss.

line 45; *for* Pa. *read* Nantucket, Mass. (*Bicknell*)

Page 80, line 17; *for* L. *read* [Rivinius] L.

Page 81, line 11; over the second **A** of **SAGITTARIA** [if, as in some
copies, lacking an accent] insert a grave accent.

Page 88, line 49; *for* **Heleochloë** *read* **Heleochloa**

Page 96, line 47; *for* **AMPHICARPON** *read* **AMPHICARPUM**,
which should bear the acute accent over the second **A**.

Page 98, line 5; *after* Ill., *insert*: Mo. (*Bush, E. J. Palmer*),
line 51; *for* s. N. Y. *read* Nantucket (acc. to *Bicknell*)

Page 99, line 26; *before* Del. *insert*: Cape May Co., N. J. (according
to W. Stone) and

line 38; *for* Md. and Ky. to N. C. and Tex. *read* Md., Ky.,
and s. w. Mo. (*E. J. Palmer*) to Tex. and N. C.

Page 103, line 9; *before* Del. *insert*: Cape May Co., N. J. (according
to W. Stone) and

Page 106, lines 32 and 57; *for* se. *read* s. e.

Page 107, line 9; *for* se. *read* s. e.

line 20; *for* Ct. *read* Nantucket (acc. to *Bicknell*)

line 45; *for* Ct. *read* e. Mass.

Page 110, line 13; *for* Ct. *read* e. Mass. (*Wiegand*)

Page 114, lines 19, 35, and 46; *for* se. *read* s. e.

Page 116, line 12; *for* N. J. to I. T. *read* Mass. (*Mrs. C. I. Cheney*)
to Okla.

Page 117, line 19; *for* se. *read* s. e.

line 31; *for* Va. to I. T. *read* Cape May, N. J. (according to
W. Stone) and Va. to Okla.

- Page 118, line 39; *for* Ct. *read* s. e. Mass. (*Rich*)
 line 56; *after* U. S. *insert*: , s. Ont. (*Klugh*), and reported
 northeastw. to N. S.
- Page 119, line 6; *add*: (Nat. from Eu.)
 line 22; *before* Del. *insert*: near Cape May, N. J. (accord-
 ing to W. Stone),
- Page 121, line 17; *add*: (Adv. from the Old World.)
- Page 126, line 29; *for* Del. to Tex. and I. T. *read* s. N. J. (according
 to W. Stone) and Del. to Fla. and Okla.
- Page 128, line 46; *for* N. Y. *read* Mass. (*Rich*)
 line 48; over the **E** of **PHLEUM** insert a grave accent.
- Page 133, line 20; *for* N. J. *read* Nantucket, Mass. (according to
 Bicknell)
- Page 135, line 37; *for* cm. *read* dm.
- Page 138, line 44; *before* Vt. *insert*: e. Mass. and
- Page 144, line 1; over the first **A** of **BECKMANNIA** insert an acute
 accent.
 line 17; *after* ground, *insert*: n. w. Wisc. (according to
 Cheney),
- Page 145, line 42; *after* southwestw. *insert*: ; occasionally adventive
 eastw.
- Page 147, line 20; *after* fields, *insert*: Mass.,
 line 38; *for* n. Ill. *read* Wisc. (according to Cheney)
 line 55; *after* southw. *insert*: occasionally adventive in
 waste places northw.
- Page 149, line 18; *for* Ct. *read* N. H. (*Batchelder*)
 line 23; *for* southw. *read* Mo. (*Bush*), southw. and south-
 eastw.
- Page 150, line 18; *for* Vt. *read* Me.
 line 27; *for* Fisch, *read* Fisch.,
 line 33; *for* Mass. *read* s. N. H. (*Batchelder*)
- Page 152, line 46; *before* n. Mich. *insert*: Bruce Peninsula, Ont.
 (according to Klugh),
- Page 153, line 47; in **DISTICHLIS** transfer the accent to the first **I**.
- Page 159, line 37; *for* Me. *read* Mass.
- Page 164, line 37; *for* w. N. E. *read* N. E.
- Page 166, line 6; add as synonym: AGROPYRUM R. & S.
 line 43; *for* Me. *read* Cape Breton I. (*Churchill*) to Cape
 Cod, Mass. (*F. S. Collins*).

[There is increasing evidence that *Agropyron pungens* is indigenous on our coast.]

Page 169, line 17; *before* O. *insert*: Mass.;

line 25; *for* Ct. *read* Mass.

Page 173, line 27; *for* *Aristatus* *read* *aristatus*

Page 176, line 1; *before* Del. *insert* Cape May, N. J. (according to W. Stone) and

line 41; *after* adv. *insert*: in Mo. (*Bush*) and

Page 177, line 13; *for* Rich. *read* Richard.

Page 180, line 2; *after* Ill., *insert*: Mo. (*Bush*),

Page 181, line 48; *for* Mich. *read* Wisc. (according to Cheney)

lines 49 and 55; *before* FIG. *insert*:—Sometimes bearing tubers.

line 54; *for* Ct. *read* e. Mass.

Page 182, line 2; *before* Va. *insert*: Cape May, N. J. (according to W. Stone) and

Page 183, lines 23 and 24; *for* Var. *vìGENS* Bailey *read* Var. *MÀJOR* Sonder.

line 25; *before* — *insert*: (Var. *vìgens* Bailey.)

[*Heleocharis palustris*, β . *major* Sonder, Fl. Hamb. 22 (1851). *Eleocharis palustris*, var. *vìgens* Bailey in Britton, Journ. N. Y. Micros. Soc. v. 104 (1889).]

Page 184, line 31; *before* N. Y. *insert*: Muddy shores, Nantucket, Mass. (*Mrs. N. F. Flynn, Bicknell*);

Page 186, line 26; in **FIMBRISTYLIS** *for* the acute accent over the **I** substitute a grave accent over the **Y**.

[*Stylus*, the New Latin botanical term for style is derived from the Greek $\sigma\tau\acute{\upsilon}\lambda\omicron\varsigma$ (a column) or its diminutive $\sigma\tau\upsilon\lambda\acute{\iota}\varsigma$, both of which have a long penultimate vowel. The word is said not to be connected with the Latin *stilus* (a pencil), which has a short penultimate vowel.]

Page 190, line 40; *after* Que. *insert*: ; also Nfd. (*Eames & Godfrey*).

Page 191, line 38; *add*: Var. *CONTÓRTUS* Eames. More slender; spikelets twisted or bent, linear-cylindric; involucral leaf longer.—Brackish marsh, Milford, Ct.

Page 194, line 7; *after* (*Haberer*) *insert*: ; also centr. Me.

Page 196, line 54; *before* South Ashburnham *insert*: Washington Co., Me. (*Cushman*);

Page 198, line 14; *for* Britton *read* Pax

[*Hemicarpha micrantha* (Vahl) Pax in Engl. & Prantl, Nat. Pflanzenf. ii. Abt. 2, 105 (1887); Britton, Bull. Torr. Bot. Club, xv. 104 (1888).]

Page 199, line 12; add as synonym: RHYNCHOSPORA R. Br.

Page 200, line 7; after (*C. F. Parker*); insert: Nantucket (*Bicknell*); line 38; *before* Del. insert: Burlington Co., N. J. (according to W. Stone) and

Page 210, line 55; for *C. typhinoïdes* read *C. typhina*

Page 212, line 37; for *C. glauca* read *C. flacca*

Page 216, line 17; for *C. typhinoïdes* read *C. typhina*

Page 219, line 37; for n. N. E. read n. and w. N. E.

Page 226, line 49; for *mm.* read *cm.*

Page 237, line 29; for **C. GLAÚCA** Scop. read **C. FLÁCCA** Schreb.

[*C. flacca* Schreb. Spicil. 669 (1771). *C. glauca* Scop. Fl. Carn. ed. 2, ii. 223 (1772).]

line 39; *after* scales. insert: (*C. glauca* Scop.)

under Fig. 457; for *C. glauca* read *C. flacca*

Page 248, line 19; for and Mich. read Mich., and Wisc. (according to Cheney).

Page 250, line 48; for **C. typhinoïdes** Schwein. read **C. typhina** Michx.

line 52; *after* ascending. insert: (*C. typhinoïdes* Schwein.)

under Fig. 531; for *C. typhinoïdes* read *C. typhina*

[This change is rendered necessary by a recent examination of Michaux's type material, which shows it to have the blunt scales characteristic of the species. Both *C. typhina* Michx. (1803) and *C. typhinoïdes* Schwein. (1824) have until recently been treated as identical with *C. squarrosa* L., but the blunt-scaled plant has of late been taken up as a distinct species.]

Page 260, line 40; over the second **A** of **ERIOCAULACEAE** insert a grave accent.

Page 261, line 26; for **E. articulàtum** (Huds.) Morong. read **E. septangulàre** With.

line 31; for *E. septangulare* With. read *E. articulatum* Morong, in part.

[The well known name *E. septangulare* With. may be reëstablished. *E. articulatum* (Huds.) Morong was taken up under the impression that *E. septangulare* was first published in Withering's Arr. Brit. Pl. ed. 3, ii. 184

(1796), the earlier description of the species in Withering's Bot. Arr. Veg. ii. 784 (1776), having been overlooked owing to the circumstance that there are by a typographical error two pages numbered 784 in the work in question. The description of *E. septangulare* in 1776 makes it clearly antedate *Nasmythia articulata* Huds. Fl. Ang. ed. 2, 415 (1778). Even if *E. septangulare* had not proved the earlier name, it is doubtful if *E. articulata* (Huds.) Morong could be adopted for our plant, since of Hudson's treatment only the citation of locality (Isle of Skye) relates to *E. septangulare* and all descriptive and synonymic matter is taken directly from Linnaeus's description of his *E. decangulare*.]

Page 264, line 55; *for* Pa. *read* Mo. (*Bush, E. J. Palmer*)

Page 265, line 25; *for* 5 *read* 12

line 28; *after* Mass. *add*: and Vt.

line 31; *for* I. T. *read* Mo. (*Bush*), Okla.

Page 268, line 21; omit: 3. *J. Gerardi*.

after line 21, insert:

Anthers about thrice the length of the filaments; capsule ellipsoid-ovoid, equaling or but slightly exceeding the perianth
3. *J. Gerardi*.

Anthers scarcely longer than the filaments; capsule globose-obovoid, distinctly exserted . . . 3a. *J. compressus*.

line 72; *after* 4 *insert*: — 5

Page 269, before line 1, insert:

Capsules 2–3 mm. long.

after line 4, insert:

Capsules 4–5 mm. long . . . 41a. *J. longistylis*.

Page 270, line 53; *before* s. N. Y. *insert*: n. N. H. (*Pease*) and

line 55; *before* cyme *insert*: leaves deep green;

after line 60, insert:

3a. **J. compréssus** Jacq. Similar, but usually lower and stouter, *glaucous*; auricles and margins of the sheaths thinner and more delicate than in no. 3; cyme usually overtopped by the elongate bract; perianth usually paler and the *globose-obovoid distinctly exserted capsule* usually darker than in no. 3; *filaments nearly equaling the anthers*. — Open soil from Murray Bay (*Eggleston*) to Quebec (*Pease*), Que.; possibly naturalized from Eu. July, Aug. (Eurasia.)

Page 271, line 3; for 3–4 mm. read 0.3–0.4 mm.

line 22; for 3.5–5 mm. read 0.35–0.5 mm.

line 50; for 3.5–4.5 read 0.35–0.45

Page 272, line 8; for Mass. read s. Me. (*Miss Furbish*)

Page 273, line 3; after Great Lakes insert: Mo. (*Bush*),

Page 275, line 3; in **subtilis** for the acute accent over the **u** substitute a grave accent over the first **i**.

Page 278, after line 11, insert:

41a. **J. longistylis** Torr. Stems (2–7 dm. high) from slender creeping rootstocks; *leaves linear, pale green*; cymes loose or dense, of 2–10 hemispherical heads; *bracts conspicuous, whitish and scarious*; *flowers about 5 mm. long*; sepals and petals greenish or castaneous with white scarious margins; capsule abruptly slender-beaked; *seeds ellipsoid, 0.5 mm. long.*—Damp sandy or gravelly shores and prairies, w. Nfd. (*Eames & Godfrey*); Detroit R., Ont. (*Macoun*); Man. to B. C., s. to Neb., N. Mex., Ariz., and s. Cal. June–Aug.

Page 283, line 35; for Gaspé Co., Que. read Nfd.

Page 284, line 20; for **ZYGÁDENUS** read **ZIGÁDENUS**

[This name was originally published as *Zigadenus* in Michaux's Fl. i. 213 (1803), and was taken up in this form by many authors including Dr. Gray, Ann. Lyc. N. Y. iv. 111 (1837). In 1837 Endlicher (Gen. 135) altered the spelling to *Zygadenus*, a form which has been pretty generally accepted. The change is certainly in the direction of philological accuracy and from the literary point of view may seem justifiable, but it belongs to a class of alterations which, if permitted in one case, lead by exceedingly slight gradations to changes of greater and greater magnitude, which, dependent solely upon varying taste and judgment, would seriously menace the stability of nomenclature. These changes are rendered the more undesirable from the impossibility of citing (truthfully) the original author as the authority for the altered form of the name. One would thus in the present instance be obliged to write *Zygadenus* Endl. for technically there was no *Zygadenus* Michx.]

Page 290, line 14; for s. N. Y. read Ct. (*Graves*)

Page 295, line 55; omit: Nantucket, Mass.

[The sterile specimens upon which *Smilax Bona-nox*

has been reported from Nantucket prove to be *S. rotundifolia*, var. *quadrangularis*. See Bicknell, Bull. Torr. Bot. Club, xxxvi. 10 (1909).]

Page 303, line 51; for *scarcely exserted* read: more or less exserted

Page 309, line 2; *before* Del. *insert*: Cape May Co., N. J. (according to Long) and

Page 316, line 48; *for* R. Br. *read* Chatelain.

Page 317, line 30; *after* Pa. *insert*: to Mo. (*Bush*),

line 44; *for* and Ont. *read* , Ont., and Gaspé Co., Que.

Page 319, lines 37 and 38; *for* A southern species extending northw. to N. J. *read* Woods, N. J. and e. Pa. to Fla. and La.; also Cuyahoga Co., O. (*Bassett*).

line 38; *for* northw. *read* northeastw.

Page 325, lines 53 and 54; omit: *scales pale brown or yellowish*;
line 54; *for* 4–6 *read* 5–8

Page 326, line 2; *before* capsule *insert*: *scales* oblong-spatulate, *brown or yellowish*;

line 3; *after* blunt *insert*: , 6.5–8 mm. long

between lines 4 and 5; *insert*:

20a. **S. subsericea** (Anders.) Schneider. Similar; leaves loosely sericeous when young, at length glabrate except the *puberulent midrib above*, rather coarsely appressed-serrate; winter buds puberulent; *scales* oblong, *with rounded blackish tips*; capsule lance-conic, blunt, loosely silky, 5–7 mm. long, its pedicel many times exceeding the gland.—Large widely branching shrub of low grounds, e. Mass. (*Emerson, Forbes*) to N. Y.

Page 327, line 20; *before* Penobscot *insert*: St. John R. and

Page 350, line 27; *before* Great Lakes *insert*: L. Champlain,
line 36; *after* N. B. *insert*: e. Me. (*Knowlton*)

Page 351, line 34; *for* n. Mich. (*Wheeler*) *read* Wisc. (*Wadmond*)

Page 352, line 54; *for* w, *read* w.

Page 356, line 30; *after* southw. *insert*: ; occasionally adventive eastw.

Page 357, line 18; omit: *spreading by running rootstocks*,
between lines 18 and 19; *insert*:

* *Erect from a caudex and deep tap root; sepals enlarged and wing-margined in fruit.*

between lines 32 and 33; *insert*:

* * *Freely spreading by slender elongated roots bearing adventitious buds; sepals scarcely enlarged in fruit.*

Page 363, line 17; *for* [Tourn.] L. *read* [Tourn.] Hill.

Page 367, line 3; *for* Stem angled, much branched *read*: *Stem angled,*
simple to much branched, *usually reddish*
line 9; *after* dwarf; *insert*: *stem whitish, terete*;
line 31; *add*: (Nat. from Eu.)

Page 369, line 41; *before* e. Que. *insert*: Nfd. and

Page 370, line 41; *for* Neb. *read* Mo. (*Canby*)

Page 371, line 30; *add* as synonym: AMARANTUS L.

line 52; *after* ground. *insert*: (Intro. from Trop.)

Page 374, line 22; *after* Tex. *add*: ; established along railroads, Mo.
(according to Bush).

line 23; over the **E** in **GOMPHRENA** *insert* a grave accent.

Page 378, line 51; *for* Don *read* G. Don

Page 382, line 42; *for* Intro. *read* Nat.

line 43; *after* situations. *add*: (Nat. from Eu.)

line 57; *for* PRÓCERA *read* PROCÈRA

Page 383, line 4; *after* Ont. *insert*: ; on moist soil and in water,
Pownal, Vt. (*Woodward*).

Page 384, line 28; *for* **L. CORONÀRIA** *read* **L. CORONÀRIA**

Page 385, line 43; *after* grounds. *add*: (Nat. from Eu.)

Page 386, line 52; *for* Adv. *read* Nat.

Page 389, line 5; in **PORTULACA** change the accent from acute to
grave.

Page 403, line 36; *for* and southw. *read* to Fla., Tex., and Mo.

Page 408, line 8; *after* green *add*: to dark purple

Page 410, line 8; *for* **ANONÀCEAE** *read* **ANNONÀCEAE**

Page 411, line 45; over the **Y** in **PODOPHYLLUM** *insert* an acute
accent.

Page 416, line 24; *for* L. *read* [Tourn.] L.

line 39; over the second **A** in **FUMARIACEAE** *insert* a
grave accent.

Page 417, line 34; *after* white *insert*: or pink

Page 418, line 21; *after* Kan. *insert*: Okla. (*Brainerd*),

Page 420, *for* lines 5 and 6, substitute:

15. **Brassica**. Seeds in a single row, subglobose.

16. **Diploaxis**. Seeds in 2 rows, ovoid. Style cylindrical,
about 2 mm. long.

16a **Eruca**. Seeds in 2 rows, ellipsoidal. Style gladiate, about 8
mm. long.

Page 421, for line 19, substitute:

Seeds 2-rowed in each cell.

Style cylindric, about 2 mm. long . . . 16. DIPLOTAXIS.

Style gladiate, about 8 mm. long . . . 16a. ERUCA.

for line 72, substitute:

Fruit thickish, 4–7 mm. in diameter.

Fruit indehiscent; seeds in 1 row . . . 14. RAPHANUS.

Fruit dehiscent; seeds in 2 rows . . . 16a. ERUCA

Page 426, line 13; *for* Ludwig *read* [Knaut] Ludwig

Page 429, after line 6, insert:

16a. **ERUCA** [Tourn.] Adans.

Pods thickish, somewhat 4-sided, tipped with a large style persisting as a flattish triangular-lanceolate beak. Seeds ellipsoidal, slightly compressed, arranged in 2 rows.—Annuals or biennials, with pinnatifid leaves and rather large flowers; the petals ocreoleucous to yellowish or purplish, with violet veins. (The classical Latin name, used by Pliny; its derivation not clear.)

1. **E. SATIVUM** Mill. Coarse erect annual; petals 2 cm. long; pods fusiform, 4-angled, erect on short stout pedicels.—Waste places and cultivated grounds, becoming established at several widely separated stations. (Adv. from the Old World.)

Page 429, line 7; *for* [Heist.] Link. *read* [Heist.] Adans.

[Although Adanson, Fam. ii. 418 (1763) spelled this name *Couringia* he clearly attributed it to Heister, who in his Ind. Pl. Rar. 34 (1730) published it as *Conringia*, dedicating it to Dr. Hermann Conring. It is clear therefore that *Couringia* was merely a typographical error, which may be corrected in accordance with Art. 57 of the Vienna Rules, and Adanson may be quoted as the first post-Linnaean authority for the genus.]

line 45; *for* Me. *read* N. E.

Page 431, line 16; *after* westw. *insert*: ; locally adventive eastw.

Page 438, line 25; *for* e. Mass. and Vt. *read* w. Me. (*Miss Furbish*)

Page 438, for lines 33–36, substitute:

* Petals entire or merely emarginate.

1. **Polanisia**. Pods scarcely or not at all stiped. Petals emarginate. Stamens 6–∞

2. **Cleome**. Pods long-stiped. Petals entire. Stamens 6.

* * Petals laciniately toothed.

3. **Cristatella**. Pods on rather short but slender stipes. Stamens 6–14.

Page 439, after line 16, insert:

3. CRISTATÉLLA Nutt.

Petals cuneately short-clawed, more or less irregularly laciniate or lacerate-fringed. Ovary declined. Capsules somewhat compressed, linear, erect, on divergent pedicels. Seeds cochleate-reniform.—Weak viscid annuals, with petiolate palmately 3-foliolate leaves. (Name from *crista*, a crest, presumably alluding to the fringe-toothed petals.)

1. **C. Jamèsii** T. & G. Erect, 1–3 dm. high; leaflets linear; flowers small; petals pale yellow, 2–3 mm. long.—Sandy places, Ill. (acc. to Gleason) to Neb. Tex., and w. La.

Page 441, line 43; add as synonym: *PODOSTEMON* Michx.

Page 443, line 26; after Ala. insert: Mo. (*Bush*),

Page 443, line 39; for **S. PURPÛREUM** Tausch read **S. TRIPHÝLLUM** (Haw.) S. F. Gray

[*Sedum Telephium*, β . *purpureum* L. Sp. Pl. i. 430 (1753). *Anacampseros triphylla* Haw. Syn. Pl. Succ. 111 (1812). *Sedum purpureum* Link, Enum. i. 437 (1821); Tausch, Flora, xvii. 515 (1834). *Sedum triphyllum* S. F. Gray, Nat. Arr. Brit. Pl. ii. 540 (1821). *Sedum Fabaria* Koch, Syn. 258 (1837). *S. Telephium* of Am. auth., not L.]

Page 443, line 47; after locally insert: on Mt. Horrid, Vt. (*D. L. Dutton*),

Page 443, line 49; for L. read [Rupp.] L.

Page 445, line 3; for Mt. read Mountain

Page 449, line 36; omit: (according to Wheelock).

[Characteristic material of *Parnassia grandiflora*, collected by Mr. B. F. Bush in Shannon County, Missouri, has been examined.]

Page 450, line 22; after radiant insert: (Var. **STÉRILIS** T. & G., in cultivation called “HILLS OF SNOW”)

Page 451, line 20; for *R. floridum* read *R. americanum*

line 32; for *R. aureum* read *R. odoratum*

line 66; for **R. flóridum** L'Hér. read **R. américànum** Mill.

[*Ribes americanum* Mill. Dict. ed. 8, no. 4 (1768). *R. floridum* L'Hér. Stirp. Nov. 4 (1784).]

Page 452, line 3; after *long.* insert: (*R. floridum* L'Hér.)

line 42; for Vt. read n. w. Mass. (*Burnham*)

line 43; for **R. aúreum** Pursh read **R. odoràtum** Wendland

line 45; for 3-4 read 2-3

line 46; for yellow or black. read black. (*R. aureum* auth., not Pursh.)

Page 456, line 55; for Borkh. read (Ait.) Borkh.

Page 459, line 2; for centr. Me. read Nfd. (*Eames & Godfrey*)

line 8; before *Aronia* insert *P. arbutifolia*, var. Hook.;

Page 460, line 4; FOR Var. **Botryàpium** (L. f.) T. & G. Leaves READ

Var. **toméntula** Sarg. Leaves (less inclined to reddish or brownish color)

lines 17 and 21; for C. Koch read K. Koch

line 36; for L. read [Tourn.] L.

line 50; for taxomic read taxonomic

Page 462, for line 18, substitute:

1. **C. MONÓGYNA** Jacq. (ENGLISH H.) Characters of the section. (*C. Oxyacantha* of Am. auth., not L.) — Sparingly

Page 472, line 13; for C. Koch read K. Koch

Page 476, line 2; for cm. read mm.

Page 481, for line 15, substitute:

Leaves pinnate, of numerous leaflets.

Achenes dorsally sulcate; stolons, peduncles, etc., pubescent

17. *P. Anserina.*

Achenes not sulcate; stolons, etc., glabrous or glabrate

17a. *P. pacifica.*

line 52; after woolly insert: , arachnoid-villous

for line 61, substitute:

form cymes.

Cauline leaves 2-5 below the inflorescence 9. *P. Nuttallii.*

Cauline leaves 8-12 below the inflorescence . 9a. *P. canescens.*

Page 483, after line 10, insert:

9a. **P. CANÉSCENS** Bess. Similar; stem grayish-lanate, 2.5-5 dm. high; leaflets decidedly paler and grayish-pubescent beneath; inflorescence also grayish-pubescent. (*P. inclinata* auth., not Vill.) — Roadsides, w. N. Y. and Ont. (Nat. from Eu.)

line 38; after below insert: , more or less minutely pilose and glandular at summit

line 39; after serrate, insert: dark green and glabrous or glabrate above,

Page 483, line 42; *add*: Var **VILLÒSA** (Pers.) Lehm. Branches, stipules, peduncles, and calyx densely villous and glandular; leaflets silky above, at least the younger glandular-villous on the midrib beneath.—Throughout the St. Lawrence system from n. N. S. and e. Que. to L. Superior and L. Winnepeg. (Greenl., n. Eu.)

Page 484, for lines 3–14, substitute:

17. **P. Anserina** L. (SILVER WEED.) Spreading by slender many-jointed runners; the *stolons*, *peduncles*, *petioles*, and *rhachises* more or less *pubescent* with ascending or loosely spreading hairs; leaves all radical, interruptedly pinnate; leaflets oblong, oblanceolate, or obovate, sharply serrate, silky-tomentose beneath, at least the younger lustrous; peduncles elongated; bractlets often cleft; *achenes* thick-ovoid to subglobose, more or less corky, *dorsally sulcate*. (*Anserina* Rydb.)—Gravelly or sandy shores and banks, e. Que. to Alaska, s. to P. E. I., N. B., Me., Vt., N. Y., Ind., centr. Ill., Ia., N. Mex., and s. Cal. June–Aug. (Eurasia.)

Var. **sericea** Hayne. Leaflets silvery-sericeous on both surfaces. (Var. *concolor* Ser.; *Anserina concolor* and *A. argentea* Rydb.)—Of similar range, more abundant westw.

17a. **P. pacifica** Howell. Similar in habit; *stolons*, *peduncles*, *petioles*, and *rhachises* *glabrous* or early *glabrate*; leaflets white-tomentose beneath with opaque hairs; bractlets usually simple; *achenes* laterally compressed, firm, rounded on the back, not *sulcate*. (*P. Anserina*, var. *grandis* T. & G.; *Anserina grandis*, *pacifica*, and *litoralis* Rydb.)—Brackish and saline soils, chiefly along the coast, Greenl. and Lab. to [L. I.;] also on the Pacific coast. (E. Asia.)

line 17; for *apparently* read *generally appearing*

line 19; for *coast of Me.* read *Me.*

Page 485, at the end of line 5, *add*: Var. **DENUDATA** (Hayne) Maxim. Leaves green and *glabrate* beneath.—Locally established in N. E. (Intro. from Eurasia.)

lines 34 and 41; before *leaves* insert: *basal*

Page 487, line 24; *after* Forma **PÁLLIDUS** (Bailey) Robinson *insert*: , n. comb. (*R. occidentalis*, var. *pallidus* Bailey, Cycl. Am. Hort. 1582)

[This, it is believed, is the only new combination in the Manual. It was the intention of the editors to

publish all new combinations in advance, recording them in botanical journals where the new species and varieties could be accompanied by proper Latin diagnoses and the new names by adequate bibliographical and synonymic citations. In this single instance the new combination was overlooked and appeared for the first time in the Manual. The transfer of Prof. Bailey's variety to formal rank was made in order to bring this minor variation into accord with color-forms as elsewhere treated in the Manual.]

Page 493, line 11; *after* Minn. *add*: and in the mts. to N. C. (*House*).

Page 496, line 60; *for* w. to Minn. and Miss. *read* w. to Minn., Ia., Mo., and Miss.

Page 497, line 24; *after* pedicels *insert*: nearly equaling or
for line 28, substitute:

e. Bracts scalelike, not petioled *f.*

f. Leaves lanceolate to oblong, ovate, or obovate *g.*

lines 29 and 40; *for f.* *read g.*

for lines 44–47, substitute:

<i>f.</i> Leaves suborbicular	9.	<i>P. Gravesii.</i>
<i>e.</i> Bracts leaflike though small, petiolate	8.	<i>P. Mahaleb.</i>

Page 500, line 9; *for* **Abizzia** *read* **Albizzia**

Page 503, line 12; over the **i** of **hirta** insert an acute accent.

Page 504, line 29; *add* as synonym: **GLEDITSCHIA** Scop.

Page 506, line 5; *for* N. H. *read* Me. (*Miss Furbish*)

Page 507, line 33; *after* La. *insert*: ; and northw. in Miss. basin to
Mo. (*Bush*).

Page 508, line 36; *after* sutures *insert*: (or by a lid in *T. pratense*)

Page 510, line 6; over the **O** of **MELILOTUS** insert a grave accent.
line 44; *for* Huds. *read* (L.) Huds.

Page 515, line 1; over the **E** of **WISTERIA** insert a grave accent.

Page 518, line 29; *for* L. *read* [Tourn.] L.

Page 525, line 28; *for* Va., Okla., and southw. *read* Va. to Ala., Tex.,
and Mo. (*Bush*).

Page 526, line 22; *for* **V.** **ANGUSTIFOLIA** (L.) Reichard *read* **V.**
ANGUSTIFOLIA Reichard

line 53; *after* *Glabrous* *insert*: or nearly so

Page 527, line 1; over the **A** of **LATHYRUS** insert an acute accent.
line 31; *for* e. Me. *read* e. Mass. (*Wiegand*).

- Page 530, line 10; add as synonym: *AMPHICARPAEA* DC.
 line 41; add as synonym: *DOLICHOLUS* Medic.
 line 47; *after* oblong. *insert*: (*Dolicholus* Vail.)
 line 50; *after* corolla. *insert*: (*Dolicholus* Vail.)
 line 55; *after* pedunculate. *insert*: (*Dolicholus* Vail.)
- Page 531, line 3; before *R. reniformis* *insert*: *Dolicholus* Vail;
 line 11; for **Millegrana** read **Radiola**
- Page 532, line 21; *for* Vt. *read* s. Me. (*Chamberlain*)
 line 26; for **MILLEGRANA** Adans. *read* **RADIOLA** [Dill.] Hill.
 line 31; *for* **RADIOLA** Roth. *read* **MILLEGRANA** Adans.
 for line 32, substitute:
1. **R. LINOIDES** R. The only species. (*M. Radiola* Druce.)
 [*Radiola* [Dill.] Hill, Brit. Herb. 227 (1756). *Millegrana* Adans. Fam. ii. 269 (1763).]
- Page 533, line 60; *for* *O. Brittonae* *read* *O. Brittoniae*
- Page 536, line 36; over the **E** of **KALLSTROEMIA** *insert* a grave accent.
- Page 540, line 20; *after* Mich., *insert*: Mo. (*Blankinship, Bush*),
- Page 542, line 19; *after* Kan. *add*: ; rarely on ballast, etc., in N. E.
- Page 544, line 49; over the **a** of **Phyllanthus** *insert* an acute accent.
- Page 549, line 10; *for* e. Que. *read* Nfd.
 after line 37, *insert*:
- 29a. **E. EXÍGUA** L. Erect annual, simple or branched from the base; stem slender; *stem-leaves linear, the floral ones lanceolate*; umbel 3-5-rayed, rays simple or freely forked; glands with short slender horns; capsule obtusely angled; seeds quadrangular-ovoid, tuberculate, about 1 mm. long.— Waste places and cultivated ground, local, Cape Breton I. (*Eames & Godfrey*); Buffalo, N. Y. (*D. F. Day*); and on ballast southw. (Adv. from Eu.)
- Page 555, line 50; add as synonym: *NEMOPANTHES* Raf.
- Page 556, line 1; over the second **A** of **CELASTRACEAE** *insert* a grave accent.
 line 24; add as synonym: *EUONYMUS* L.
- Page 557, line 31; over the second **A** of **ACERACEAE** *insert* a grave accent.
- Page 562, line 6; *for* rarely *read* or

Page 563, line 15; *for* Vt. *read* Me.

line 48; *for* "Mo." *read* Mo.

[Mr. B. F. Bush has sent characteristic material of *Cissus incisa* from several stations in Missouri.]

line 49; over the first **I** in **VITIS** insert a grave accent.

Page 566, line 42; *after* etc. *insert*: , and in cultivated fields westw.

Page 568, line 5; *for* Cav. *read* (L.) Cav.

line 20; before *sessile* *insert*: partly

between lines 50 and 51, *insert*:

1a. **C. Búshii** Fernald. *Stem erect, retrorsely hirsute* and minutely stellate-puberulent, 5 dm. high, from a napiform root; leaves suborbicular to broadly ovate, the lower with 5–7 oblong or obovate coarsely toothed lobes, the upper slightly 3-lobed; peduncles 1-flowered; bractlets ovate; calyx-lobes narrowly lanceolate; petals purple, 2–2.5 cm. long, truncate, erose-denticulate; carpels rugose-reticulate.—Woods, s. w. Mo.

[**Callirhoë Bushii** Fernald, n. sp., perennis erecta; radice napiformi; caule ca. 5 dm. alto retrorse hirsuto et minute stellato-puberulo; foliis utrinque viridibus hirsutis cordatis petiolatis, radicalibus 6–10 cm. diametro suborbicularibus 5–7-lobatis vel -partitis, lobis oblongis vel obovatis obtuse vel acute super mediam partem paucidentatis, petiolis 1.5 dm. longis retrorse hirsutulis; foliis caulinis superioribus late ovatis plus minusve trilobatis, lobis grosse paucidentatis; stipulis ovatis obtusis 1–1.3 cm. longis hirsuto-ciliatis; pedunculis hirsutis et stellato-puberulis 7–11 cm. longis 1-floris; involucello 3-phylo, bracteolis calyce demidio brevioribus; calycis lobis anguste ovatis acuminatis 1.5–2 cm. longis extus viridibus infra mediam partem hispidis intus minutissime canescenti-puberulis; petalis 2–2.5 cm. longis purpureis obovatis truncatis eroso-denticulatis; carpellis 4.5 mm. longis rugoso-reticulatis, rostro brevissimo incurvato.—Woods of the Ozark region of southwestern Missouri. Type collected at Eagle Rock, 7 Aug. 1905, B. F. Bush, no. 3145 (in Gray Herb.).

Related to *C. Papaver* (Cav.) Gray, which has the less copious pubescence of the stem, etc., ascending and usually appressed; the cauline leaves with narrowly lanceolate or linear divisions; and the bractlets of the involucl linear or narrowly lanceolate.]

Page 570, line 46; add as synonym: **STUARTIA** L'Hér.

Page 571, line 25; over the **A** of **ASCYRUM** insert an acute accent.

Page 573, line 42; *for* Mich. *read* Wisc. (*Wadmond*)

Page 578, line 59; *for* N. H. *read* Me. (*Miss Furbish*)

Page 579, line 5; *for* Nantucket *read* Norfolk Co., Mass. (*Wiegand*)

Page 589, line 1; over the **U** of **OPUNTIA** insert an acute accent.

Page 593, line 5; *add*: Var. GRACÍLIOR Turcz. Glabrous or essentially so; leaves rounded or cordate at the base; spike slender and loosely or often remotely flowered.—Locally established, Me. (*Miss I. W. Anderson*) and Mass. (*Rich*). (Intro. from Asia.)

Page 594, line 46; *add* as synonym: LUDWIGIA L.

Page 596, line 1; *for* L. *read* [Dill.] L.

line 18; *after* entire *insert*: or merely notched

line 20; *omit*: ; leaves entire or subentire, with revolute margins

after line 20 *insert*:

Seeds obovate, truncate or rounded at summit; coma quickly deciduous; leaves plane, somewhat toothed.

2a. *E. paniculatum*.

Seeds fusiform, distinctly beaked; coma somewhat persistent; leaves entire or subentire, with revolute margins.

After line 49, *insert*:

2a. **E. paniculatum** Nutt. *Annual*, 3-8 dm. high, glabrous or glabrate; the *cortex exfoliating at base*; leaves *opposite or alternate* and bearing tiny axillary fascicles, lanceolate, sparingly denticulate, mostly petioled; flowers scattered, on often *bracted peduncles*; petals purple, about 8 mm. long; *seed obovate*, papillate, with early deciduous sordid coma.—Clearings and open places, Bruce Peninsula, Ont. (*Macoun*) to B. C., s. to S. Dak., Col., Ariz., and s. Cal.

Page 598, line 36; *omit* w.

Page 604, line 14; *for* n. Me., L. Memphremagog, Que. *read* n. and w. N. E.

Page 606, line 4; *after* southw. *insert*: ; occasionally spreading from cultivation northw.

Page 612, *for* lines 19-30, *read*:

Stylopodia erect or slightly divergent, distinct to the base
 Pedicels rather slender, not clavate; stems glabrous or sparingly pilose 1. *C. procumbens*.
 Pedicels short, clavate; stems rather densely pilose especially toward the base 2. *C. Tainturieri*.
 Stylopodia connivent or at least somewhat convergent
 3. *C. texanum*.

1. **C. procumbens** (L.) Crantz. Slender, loosely branched often from the base, 1.5–5.5 dm. high; leaves glabrous or nearly so; the lobes of the leaflets oblong, bluntish or rounded at the apex; umbels long-peduncled or sessile, few-rayed; umbellets 2–6-fruited; *pedicels* 2–11 mm. long, *of nearly uniform thickness*.—Rich low woods and damp shady places, N. Y. to Mich., Ia., e. Kan., Miss., and N. C.

2. **C. Tainturièri** Hook. Erect or spreading, 2–7 dm. high; leaves distinctly pilose; the *lobes of the leaflets lanceolate to oblanceolate*, acutish; umbels sessile or rarely peduncled; umbellets 4–10-fruited; *pedicels* 1–9 mm. long, *thickish and clavate*.—Open woods and fields, Va. (Churchill) to Mo. (acc. to Bush) and southw. to the Gulf.

3. **C. texànum** Coult. & Rose. Erect, subsimple or often loosely branched, 2–6 dm. high, shortly and rather densely pubescent at least toward the base; leaves glabrous or sparingly pilose; the *lobes of the leaflets linear*; umbels sessile; umbellets 3–15-fruited; *pedicels clavate*, 0.5–8 mm. long; fruit glabrous.—Prairies and limestone barrens, w. Mo. (Blankinship, Bush), Kan., and Tex.

Page 612, line 36; add as synonym: OSMORRHIZA Reichenb.

Page 614, line 35; *for* L. *read* [Rupp.] L.

Page 615, line 18; *after* Aug. *add*: (Eu.)

Page 616, line 35; *for* **P. SAXÍFRAGA** *read* **P. SAXÍFRAGA**

Page 617, line 17; over the **A** of **SCANDIX** insert an acute accent.

Page 623, line 13; *for* O. *read* Mo. (Bush).

line 28; *for* cuspidate; rays numerous *read* cuspidate, primary umbels 6–10 cm. broad, rays numerous; *leaves of the involucre simply pinnate*, with long linear attenuate segments

after line 31, insert:

2. **D. pusillus** Michx. Similar; merely hispidulous; leaves more finely divided; the primary umbels 2–6 cm. broad, their rays short; *leaves of the involucre bipinnatifid*.—Barrens, etc., S. C. to Fla., Tex., Mo. (Bush), and westw. across the continent.

Page 624, line 48; *for* Minn. and Man. *read* Man. and Mo. (Bush).

Page 625, line 33; *for* Mich. *read* Wisc. (Wadmond)

Page 626, line 28; over the first **E** of **RHODODENDREAE** insert an acute accent.

Page 627, line 31; over the **E** of **CLETHRA** insert a grave accent.

Page 630, line 37; *for* L. *read* [Rupp.] L.

Page 632, line 19; *after* regions *insert*: ; Dells of the Wisconsin (according to Cheney & True)

Page 638, line 26; *for* C. Koch *read* K. Koch

Page 640, between lines 2 and 3, *insert*:

Var. **myrtilloides** (Michx.) Fernald. Leaves and young twigs pilose; leaves with bristle-tipped teeth.—Nfd. and Lab. to Hudson Bay, s. to N. S., Me., and Mass.

Page 641, line 45; *for* Var. INTERMEDIUM Gray *read* Var. OVALIFOLIUM Michx.

line 48; *before* — *insert*: (Var. *intermedium* Gray.)

[Recent studies of the Michaux herbarium show that *Vaccinium Oxycoccus* L., var. *ovalifolium* Michx. Fl. Bor. Am. i. 228 (1803) is identical with Var. *intermedium* Gray, Syn. Fl. ed. 2, ii. pt. 1, 396 (1886).]

Page 642, line 37; over the first **A** of **GALAX** *insert* a grave accent.

Page 643, line 6; over the **O** of **LIMONIUM** *insert* a grave accent.

Page 646, line 45; *for* L. *read* [Rupp.] L.

Page 648, line 1; over the second **A** of **SAPOTACEAE** *insert* a grave accent.

Page 654, line 38; over the second **A** of **SABATIA** *insert* a grave accent.

Page 657, line 1; in **procera** for the acute accent over the **o** substitute a grave accent over the **e**.

line 17; *before* n. N. B. *insert*: Nfd.

Page 661, line 47; *after* in *insert*: e. Mass. (*Rich*) and

Page 667, lines 44 and 45; *for* e. Mass. and Vt. *read* Me. (*Miss Furbish*)

Page 670, line 4; over the **E** of **IPOMOEAE** *insert* a grave accent.

Page 671, line 36; in **CUSCUTA** for the acute accent over the first **U** substitute a grave accent over the second **U**.

line 43; *omit*: annual

Page 678, line 1; over the **E** of **PHACELIA** *insert* a grave accent.

line 18; *for* O. to Mo. *read* Va. to O., Ill.

between lines 18 and 19, *insert*:

Var. **brevistylis** (Buckley) Gray. Corolla smaller; style and stamens included. (*P. brevistylis* Buckley.) — N. C. to Ala. and Mo.

Page 680, line 14; over the second **O** of **HELIOTROPIUM** *insert* a grave accent.

Page 681, line 8; *after* Biennial *insert*: or perennial

Page 683, line 1; over the first **Y** of **SYMPHYTUM** insert an acute accent.

Page 690, line 14; over the second **A** of **CALLICARPA** insert an acute accent.

Page 693, line 33; for BÒTRYs read BÒTRYs

Page 694, line 19; *for* L. *read* [Rivinius] L.

Page 697, line 20; *for* L. *read* [Rivinius] L.

Page 698, line 27; over the **E** of **PHYSOSTEGIA** insert a grave accent.
line 49; at the beginning of the line insert: 2.

Page 699, line 50; *for* Wallr. *read* (Hoffm.) Wallr.

Page 700, line 1; *for* L. *read* [Tourn.] L.
after line 10, insert:

+— *Upper leaves sessile and clasping.*

line 13; *after* Oct. *insert*:—A cleistogamous form with minute tubular not obviously bilabiate corolla occurs.
after line 14, insert:

+ + *Leaves all petiolate.*

lines 15 and 16; *for* crenate-toothed, *all petioled* read:
crenate-toothed, the uppermost crowded, cordate, dark green and usually purplish-tinged; calyx commonly with purple angles

between lines 16 and 17, insert:

2a. **L. HÝBRIDUM** Vill. Similar, somewhat stouter; *leaves* pale green, *deeply and incisely toothed*, the uppermost less crowded, often subrhombic; calyx usually green throughout.—Waste and cultivated ground, N. E. to Pa., becoming frequent. (Adv. from Eu.)

Page 701, line 52; *for* Pa. *read* Mass. (*Wiegand*)

Page 705, line 26; *for* Vt. *read* N. E.

Page 706, line 12; *for* Mass. *read* Me. (*Miss Furbish*)

Page 708, line 31; *for* and Ky. to Fla. and Tex. *read* to Mo., Tex., and Fla.

Page 709, line 28; *for* N. H. *read* Me.

Page 710, line 30; *for* Ct. *read* Mass. (*Mrs. N. F. Flynn*)
line 52; *for* Ct. *read* Mass. (*Mrs. N. F. Flynn*)

Page 711, line 52; *for* toothed *read* blunt-dentate

line 53; *add*: Var. **CRÍSPA** Benth. Leaves laciniate-dentate. (Var. *nankinensis* Britton.) —Waste places,

roadsides, etc., Mass. to Ill., and southw. (Introd. from Asia.)

Page 712, line 22; for LYCOPÉRSICON read LYCOPÉRSICUM.

[*Lycopersicum* Hill. Veg. Syst. ix. 32 (1765). *Lycopersicon* Mill. Dict. ed. 8 (1768). Hill's use of this generic name appears to be the earliest in post-Linnaean times and should therefore determine the form to be adopted.]

Page 713, line 48; *after* southwestw. *add*: ; adventive in Mass.

Page 715, line 3; *after* southw. *add*: ; adventive in N. E.

Page 716, line 24; for **N. PHYSALODES** read **N. PHYSALODES**

[The specific name *physalodes* was originally used by Linnaeus (*Atropa physalodes*) Sp. Pl. i. 181 (1753) before its use as a generic name by Boehmer in Ludwig, Def. 41 (1760). There is therefore no occasion to capitalize the name on account of Recommendation X. of the Vienna Rules.]

Page 719, line 37; over the first **A** of **LINARIA** insert a grave accent.

Page 720, lines 16 and 19; before *Elatinoides* insert: *Kickxia* Dumort.;

Page 725, line 33; *after* summer *insert*: , sometimes late in the season
minute and cleistogamous

line 49; *for* e. Mass. *read* s. N. H. (*Batchelder*)

line 51; *for* L. *read* [Rupp.] L.

Page 726, line 23; *before* Me. *insert*: N. S. (*Eames & Godfrey*),

Page 729, line 44; *after* PECTINATA Nutt. *insert*: (*Dasystoma pectinata* Benth.)

line 45; *after* calyx. *add*: — N. C. to Fla., w. to s. Mo. and Tex.

Page 732, line 20; add as synonym: CASTILLEIA Spreng.

Page 733, line 50; *after* coast *add*: , rarely inland,

Page 742, line 22, *after* concave *insert*: or plane

for line 23, substitute:

1. **Dianthera**. Bractlets narrowly lanceolate to linear, inconspicuous.

2. **Dicliptera**. Bractlets spatulate to obovate or suborbicular, conspicuous.

line 25; for 2 read 3

line 26; for 3 read 4

after line 39, *insert*:

2. **DICLÍPTERA** Juss.

Calyx deeply 5-parted. Corolla deeply bilabiate;

upper lip entire or emarginate, the lower spreading, slightly if at all 3-lobed. Stamens 2.—Branched perennial herbs, chiefly of low moist ground. Bractlets 2 or 4, opposite in pairs and forming a sort of involucl, the outer subequal, commonly appressed to each other and more or less inclosing the fruit. (Name from *δικλῖς*, *double-folding*, as of doors, etc., and *πτερόν*, *a wing*, alluding to the involucl.) DIAPEDIUM Konig.

1. **D. brachiata** (Pursh) Spreng. Erect or somewhat decumbent, 3–7 dm. high, smoothish or covered with spreading pubescence; leaves ovate, entire, acute, petioled, acutish or obliquely acuminate at the base; corolla 13–18 mm. long, pink or pale purple; bractlets spatulate-obovate, narrowed at the base. (*Diapedium* Ktze.)—Rich woods, sandy bottoms, etc., Mo. (*Bush*) to N. C., Fla., Tex., and Kan.

line 40; for **2** read **3**

Page 743, line 18; for **3** read **4**

Page 746, line 4; *add*: Dwarf plants with bracts slightly or not at all exceeding the flowers are sometimes separated as Var. NUTTALLII (Rapin) Morris.

Page 747, line 20; for **A. GALIOIDES** Benth, read **A. GLAÚCA** (L.) Bess. line 22; *after* panicle *insert*: (*A. galioides* Bieb.)

[*Asperula glauca* (L.) Bess. Enum. Pl. Volh. 7 (1821–22). *Galium glaucum* L. Sp. Pl. i. 107 (1753). *A. galioides* Bieb. Fl. Taur.-Cauc. i. 101 (1808).]

Page 749, line 4; *before* Cape *insert*: Nfd. (*Eames & Godfrey*),

Page 756, line 3; *after* Fla. *add*: and Mo. (*Bush*).

Page 760, line 23; for dm. read cm.

Page 767, line 19; for C. Koch read K. Koch

Page 768, line 20; for Newport read Jamestown

Page 773, line 52; for **HELEINEAE** read **HELENIEAE**

Page 782, line 47; *after* bogs, *insert*: Kingston, Mass. (*Rich & Knowlton*);

Page 793, line 24; for e. Mass. read s. Me.

Page 796, line 18; in **procera** for the acute accent over the o substitute a grave accent over the e.

Page 799, line 38; *after* southw. *insert*: ; established in Mass.

Page 800, line 26; for squarroase read squarrose

Page 801, line 36; at end of line add: 8. *A. spectabilis*.

omit lines 37–40.

line 69; for 34. *A. depauperatus* read 34. *A. parviceps*

Page 802, for lines 49 and 50, substitute:

Bracts without firm subulate tips.

Rays less than 1 cm. long . . . (38) *A. dumosus*, v. *Dodgei*.

Rays 1.5–2 cm. long 55. *A. nemoralis*.

Page 803, line 22; for (34) *A. depauperatus*, v. *parviceps* read 34.

A. parviceps

line 43; before Kan. insert: Mo. (*Bush*) and

Page 805, line 31; after stems insert: (1.2–)

line 33; for oblong-lanceolate read from elliptic-ovate to oblanceolate

lines 43 and 44; for Moist ground, coast of N. J. and southw. read Open ground, chiefly among the mts., s. e. Ky. to N. C. and Ga.

[*Aster surculosus* Michx., originally collected “in sylvis Carolinae septentrionalis,” is a clearly marked species, with glandless though often pubescent blunt involucre bracts, very typical of the mountain region of western North Carolina and the adjacent states. It has long been reported as growing in the New Jersey pine barrens, although Dr. Britton, in the Illustrated Flora, implies a doubt as to its presence in New Jersey. There are apparently two sources for the New Jersey report: first, Dr. Gray’s record, in the Synoptical Flora, of the species from “coast of New Jersey to Georgia, and on the Blue Ridge in North and South Carolina”; second, the record by Dr. Britton, in his Catalogue of Plants found in New Jersey, of the species from Middlesex Co., N. J. Dr. Britton’s later doubt of the occurrence of the plant in New Jersey, implied in the Illustrated Flora, disposes of the second record. It remains then to determine only the basis of Dr. Gray’s record. This is a very slender narrow-leaved plant, collected by Dr. Gray in 1833 at Middletown Point. In its narrow leaves and slender habit it strongly suggests the Carolinian *A. surculosus* but unlike that plant it has the more pointed involucre bracts densely glandular as in *A. spectabilis* Ait. The plant, however, is much smaller in all its parts than well developed *A. spectabilis* and upon casual examination would be scarcely referred to it;

but Mr. F. S. Collins has recently collected in the extremely sterile soil of Eastham on Cape Cod a dwarfed plant, quite identical with the Middletown material, which is unquestionably a depauperate state of the common *A. spectabilis*. There is, then, no question that the small plant of the New Jersey coast is a starved phase of *A. spectabilis* rather than the Carolinian *A. surculosus* to which it has been referred.]

Page 810, line 28; *before* T. & G. *insert*: (Michx.)
for lines 37 to 50, substitute:

34. **A. párviceps** (Burgess) Mackenzie & Bush. Stem pilose to glabrate, 3–7 dm. high; basal leaves spatulate; stem-leaves linear or lanceolate, those of the branches linear-subulate; *heads* numerous, *small*, 4–5 mm. *high*, borne on the short branches; *involucre turbinate*, 2–3 mm. *broad*, of about 20 linear-subulate bracts, these less rigid than those of the preceding species; rays white, 10–20. (*A. ericoides*, var. Burgess.)—Prairies and woods, Ill. and Mo. Sept., Oct.

Var. **pusíllus** (Gray) Fernald. Slender, glabrous, 1–4 dm. high; leaves much smaller, linear to linear-subulate; heads scattered, terminating the slender divaricate branches. (*A. ericoides*, var. Gray; *A. ericoides*, var. *depauperatus* Porter.)—Serpentine barrens, s. Pa. and adjacent W. Va. July–Sept. FIG. 950.

under Fig. 950; *for* *A. depauperatus* *read* *A. depaup.*, v. *pusillus*

[When the combination *A. depauperatus* was made for the plant of serpentine barrens the fact was overlooked that Mackenzie & Bush had already published *A. parviceps*. The nomenclatorial history of the plants is as follows:

Aster parviceps (Burgess) Mackenzie & Bush, Fl. Jackson Co. 196 (1902). *A. ericoides parviceps* Burgess in Britton & Brown, Ill. Fl. iii. 379 (1898). *A. depauperatus*, var. *parviceps* Fernald, RHODORA, x. 94 (1908).

Aster parviceps, var. **pusillus** (Gray) Fernald, comb. nov. *A. ericoides*, var. *pusillus* Gray, Syn. Fl. i. pt. 2, 184 (1884). *A. ericoides depauperatus* Porter, Mem. Torr. Bot. Club, v. 323 (1894). *A. depauperatus* Fernald, RHODORA, x. 94 (1908).]

Page 811, line 32; *after ascending insert*: , glabrous or nearly so
 line 33; *add*: Var. DÓDGEI Fernald. Similar; stem and
 lower surface of the leaves densely cinereous-puberulent.
 — Mouth of the St. Clair R., Mich.

Page 815, line 36; *for southw. read* southw. and southwestw.

Page 823, line 51; *after places, insert*: Nfd. (*Eames & Godfrey*) and

Page 828, line 17; *for rootstocks read* roots

line 20; *after southwestw. add*: ; rarely adventive eastw.

Page 833, line 6; *before Minn. insert*: Prairies, n. w. Wisc. (according
 to Cheney) and

line 7; *after established insert*: at Peoria, Ill. (*McDonald*)
 and

Page 841, lines 9–11; FOR *leaves bright green*, undivided or some of the
 lower deeply parted, lanceolate or elliptic, large, acuminate,
slender-petioled, coarsely serrate; READ *leaves*
 coarsely serrate, at least the *primary cauline 3-lobed*
the two lateral oblong lobes broad-based and conspicu-
 ously *decurrent to the broadly margined petiole*; upper-
 most and rameal leaves usually unlobed, subsessile or
 shortly petioled;

line 16; *for N. E. to Minn. and Mo. read* Que. to Mich.
 and Mass., and doubtless southw.

between lines 17 and 18, insert:

Var. **petiolàta** (Nutt.) Farwell. All or nearly all the
 leaves unlobed, tapering to a slender or narrowly mar-
 gined petiole.— Me. to Minn. and Kan.

Page 842, line 33; add as synonym: BALDWINIA T. & G.

Page 845, line 17; add as synonym: DYSODIA DC.

Page 848, line 3; *for L. read* [Tourn.] L.

line 33; *for L. read* [Tourn.] L.

Page 849, line 19; for PRÓCERA read PROCÈRA

Page 853, line 44; *before e. Que. insert*: Nfd. (*Eames & Godfrey*) and

Page 854, line 43; *before Gaspé Co. insert*: Nfd. (*Eames & Godfrey*) and

Page 856, line 4; for **A. MÌNUS** Bernh. read **A. MÌNUS** (Hill) Bernh.

Page 859, line 8; *after* (*G. W. Holt*) *insert*: ; waste land, Boston,
 Mass. (*Rich*)

line 19; add as synonym: ONOPORDON Hill.

Page 861, line 10; *before N. S. insert*: Nfd. (*Eames & Godfrey*) and

Page 862, line 17; for **A. MÍNIMA** (L.) Dumort. read **A. MÍNIMA** (L.) Link.

[*Arnoseris minima* (L.) Link, Enum. ii. 294. (1822);
Dumort. Fl. Belg. 63 (1827). *Hyoseris minima* L. Sp.
Pl. ii. 809 (1753).]

Page 863, line 13; for L. read [Vaill.] L.

Page 867, line 3; for e. Mass. to Ind. read N. E. to Neb. (Bates).

Page 871, line 48; for N. S. read e. Me.

Page 872, line 36; after Ont. insert: , Wisc.,

Page 873, line 55; for Mass. read w. Me. (Miss Furbish)

Page 888, column 2; beneath *hirsuticaulis* 812 insert: *ianthinus* 805

“ *multiflorus* 811 insert: *multiformis* 805

“ *nemoralis* 816 insert: *nobilis* 805

column 3; beneath *tennesseensis* 515 insert: *violaris* 805

Page 924, column 1, line 38; for *Oxycoccus* read *Oxycoccos*

GRAY HERBARIUM.

ON THE NATURE OF SO CALLED ALGAL OR BOGHEAD COALS.

EDWARD C. JEFFREY.

As the result of the studies of the French and Belgian paleobotanists Renault and Bertrand, on the dull bituminous coals and schists, certain organisms have been described, which have been considered by these authors to be the remains of oil-containing colonial gelatinous green Algae. It is assumed that the supposed Algae owe their preservation, in spite of their delicate organization, to the presence of bitumen throughout the matrix in which they have become fossilized. The origin of this bituminous matter has always been a puzzling problem. It has been variously suggested that it is derived from the putrefaction of animals, through the decay of part of the algal matter, or even as a product of the precipitation of the dark brown humus-saturated bog water, in which the Algae are supposed to have existed.

The study of coal presents a scientific problem of peculiar technical difficulty. On account of its black opacity, its structure can only be